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ABSTRACT

This paper examines the life-span approach to developmental psychology as it relates to teacher development research and presents some empirical results demonstrating the potential of the approach for increasing understanding of teacher development. Five assumptions of the life-span orientation as applied to the study of teacher development are discussed. Additionally, a typology of characteristics of life events is specified. Both assumptions and categories of the typology are viewed in relation to their implications for teacher development. Reported next, as an illustration of the value of the life-span approach, is a longitudinal exploratory study of preschool teachers enrolled in the 2-year Child Development Associate inservice education program. In October 1981, May 1982, and March 1983, 55 subjects were administered a battery of measures to assess the teacher-as-person, teacher-as-teacher, and teacher-as-teacher-as-person. Findings revealed differences between first- and second-year trainees; effects of teaching experience; variation across time on teacher-as-person variables; and significant relationships between teacher beliefs and personal characteristics. In conclusion, the design and results of the study are discussed with respect to the contribution that a life-span approach to teacher development may have on the study of inservice education. (RH)

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# Implications for Research of a Life-span Approach to Teacher Development

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Abstract

The concept of teacher development is considered from a life-span perspective, and several aspects of teacher development are differentiated. As an example of research from a life-span perspective, empirical results are presented from an ongoing research project on the characteristics and changes in preschool teachers in a continuing education program.

# Implications for Research of a Life-span Approach to Teacher Development

The field of life-span developmental psychology provides a useful perspective on the study of teachers and teacher development. It challenges some existing assumptions of more traditional teacher development research and aids in the differentiation of several aspects of teacher development that have heuristic value in directing future research. The purposes of this paper are to explicate the life-span approach as it relates to teacher development research and to present some empirical results that demonstrate the potential of this perspective for guiding our understanding of the processes of teacher development.

## A Life-span Perspective

Life-span developmental psychology represents an approach or orientation to the study of human development rather than a particular theory or set of propositions and assumptions (Baltes, Reese, & Lipsit, 1980). Indeed, there are variations in the perspective that are important and remain points of debate (cf. Hultsch & Plemons, 1979). However, there are five generally acknowledged assumptions that are particularly relevant to the study of teacher development.

First, a life-span orientation assumes that behavior-change processes can occur at any point in the life-span from conception to death. This is in contrast to the traditional behavioral growth model which assumes that growth and development occur until a state of

maturity is reached (in adolescence or adulthood), then little change takes place until decline with aging. In a life-span orientation, no special state of maturity is assumed, so development is seen as a life-long process. The task is to identify the form and course of these behavioral changes as they occur during the life course and to establish their pattern and interrelationships (Baltes et al., 1980). Recent work in adult development has established that while stability is common change within the individual, or plasticity, does occur in intellectual functioning (e.g., Schaie, 1979, 1982), personality (e.g., Schaie & Parham, 1976), attitudes, and interests (Kelley, 1955).

As related to teacher development, a life-span perspective suggests that the assumption that all significant learning and development take place during preservice training and induction should not be made. Rather, the possibility of changes throughout teachers' career should be acknowledged, and the types and timing of changes that do occur should be systematically studied.

Second, a life-span approach recognizes that change can occur in many ways. Changes can be quantitative, qualitative, abrupt, gradual, and may be initially positive or negative. Changes may begin in childhood and end in childhood, they may begin in childhood and end in adulthood, or they may begin in adulthood and end in adulthood. Contrary to some psychological theories, the life-span perspective does not restrict the term development to change that is qualitative, irreversible, and end-state oriented (cf. Baltes, Reese, & Nesselroade, 1977). That is, the term development is not restricted to cognitive developmental change in the Piagetian sense. This narrow class of

changes represents but one type of development. That is, the work of Sprinthall and colleagues (e.g., Glassberg & Sprinthall, 1980; Oja, 1980; Sprinthall, 1980) on the cognitive, moral, and ego development of teachers represents one type of teacher development, but other types also need to be studied.

Third, in a life-span approach, what is sought is the ability to describe, explain, and modify intraindividual change (i.e., change within an individual) and interindividual differences in intraindividual change (Baltes et al., 1977). This definition has implications for the methods of studying change. Intraindividual change can only be directly studied with longitudinal studies. Traditional quantitative analyses of longitudinal data involve analyses of mean differences through ANOVA (or MANOVA) and correlations. ANOVA gives information about mean intraindividual changes. If subgroups have different patterns of changes, these can be masked by overall mean changes. Correlations between different times of measurement assess consistency of ranking of individuals or interindividual differences in intraindividual change. A comprehensive study of teacher development should involve studying intraindividual change of teachers, using longitudinal studies, as well as exploring interindividual differences in these intraindividual changes. There are currently few longitudinal studies of teacher development. When such studies have occurred, they have failed to account for cohort differences, or differences between generations. Cohort differences have been found in psychometric intelligence in adults (Schaie, 1979, 1982) and in personality variables in adults (e.g., Woodruff & Birren, 1973) and

adolescents (Nesselroade & Baltes, 1974). Such differences are clearly important to both our description and understanding of developmental processes.

Fourth, a life-span approach is typically contextual. A contextual approach recognizes the importance of conceptualizing and describing changing environmental contexts as they impinge on individual development. Individual development does not occur in a vacuum, but in a complex changing world over which the individual has some influence. Implied is the notion that changes can occur in many contexts of individuals' lives and that an individual's development may proceed differently in different contexts. For teachers, these contexts can be divided simply into two categories: the professional setting and all other settings (e.g., community, home). For purposes of the current line of research, the professional lives of teachers have been delineated as those that occur in school-work context. That is, we have adopted the somewhat simple dichotomy based on environment/behavioral demands that has proven useful in environmental psychology and anthropology (cf. Hall, 1970). In relation to the school-work context, we have used the term teacher-as-teacher. Fuller's (e.g., Fuller, 1969; Fuller & Brown, 1975) research on concerns of teachers addresses development of teachers-as-teachers (i.e., within the school-work context). We have used the term teacher-as-person in relation to all other contexts. Since this includes the range of personal, family, and community life, it incorporates virtually all aspects of the field of adult development and aging outside the work domain. This crude distinction permits recognition of the fact that individuals in the field of teaching

experience (at least) two concurrent developmental patterns: that of person and that of professional.

Where an individual teacher is in one developmental stream may influence his or her development in the other stream. For example, the personal development of teachers may influence their professional development. This type of interaction can be called teacher-as-person-as-teacher and is exemplified in the work of Sprinthall and colleagues (e.g., Glassberg & Sprinthall, 1980; Sprinthall & Thies-Sprinthall, 1983), who have applied cognitive developmental theories to the classroom setting and professional lives of teachers. Alternatively, the development of the teacher as a professional may impinge upon the personal development of the teacher. This may be called teacher-as-teacher-as-person. Some aspects of this was explored by Spencel-Hall (Note 1), who has studied the home and school lives of teachers.

Fifth, in a life-span approach, the determinants of development are believed to be pluralistic. Baltes et al. (1980) suggest three types of influences: normative age graded, normative history graded, and non-normative. Normative age graded influences are biological and environmental determinants that in terms of their onset and duration are highly correlated with chronological age. Examples are walking and talking, going to school, and age at first marriage. For teachers, a normative age graded event would be student teaching. Normative history graded influences are biological and environmental determinants associated with historical time and historical contexts related to cohort. They are normative if they occur to most members of a given

generation (or cohort) in similar ways. Examples are economic depressions, wars, and major epidemics. For teachers, examples would include changes in widespread educational philosophy such as emphasis in back-to-basics or minimal competency testing. The recent report of the Presidential Commission on Education may mark the beginning of such a normative historical change in educational practice. Non-normative life events are biological and environmental determinants that do not occur in any age graded or history graded fashion for most individuals. Events are called non-normative if there is no general homogeneity among individuals in the occurrence and patterning of the event. Examples for the general population are medical trauma, divorce, unemployment, and career changes. Examples for teachers may be loss of job through reduction-in-force or change in job due to school consolidation.

These three types of influences are sometimes called life events. Recently, attempts have been made to provide a typology or categorization of life events (Brim & Ryff, 1980; Danish, Smyer, & Nowak, 1980). This work assumes that life events are multidimensional, but there are orderly ways of classifying them. These characteristics include:

1. Timing. Is the timing of life or professional events congruent with either personal or society expectations? For example, retirement at age 50 years is "off-time," while retirement after 62 years is considered "on-time." Similarly, being a student teacher at age 22 may be "on-time," but at 45 years the same event may be

construed as "off-time." Support networks are more likely to be available to assist or ease the changes if the event is "on-time" (Neugarten, 1968).

2. Duration. What is the temporal extent of the event, including the anticipation of the event, the event itself, and the post event influences? The event of student teaching typically varies in length from 4 weeks to 16 weeks. This is a much anticipated event (Lortie, 1975) and may have post event influences that affect the behavior of beginning teachers.

3. Sequencing. Does the event or task appear in a personally and societally acceptable order. For example, having a child before marriage would be considered out of sequence in most parts of our society. Similarly, holding a teaching position prior to obtaining certification is out of sequence.

4. Specificity. Is the event or transition unique to the individual or cohort? Have others experienced similar events or transitions? Losing a job in a depression when many others lose their jobs may have a different meaning for the individual than losing a job in a time of low unemployment.

5. Contextual purity. To what extent do the various life and professional tasks interact or interfere with each other? Student teaching is a professional life task, but frequently has implications for the student's personal life as well since it may involve moving to another town and living in an unfamiliar place away from family and friends. Interactions among life tasks (or events) in the personal and professional context we classify in the teacher-as-person-as-teacher or the teacher-as-teacher-as-person categories.

## Empirical Research

The life-span perspective has guided a series of research and evaluation studies involving a relatively unique group of preschool teachers enrolled in an extensive inservice education program (Peters, 1981; Peters, Note 2). Each of the teachers was a full-time employee who was engaged in additional academic coursework in order to obtain the national Child Development Associate (CDA) credential. As an older group (mean age: 36.3 years), already employed as teachers prior to obtaining credentialing, they were "off time" and "out of sequence." The Child Development Associate-focused two-year inservice education program in which they were enrolled provided coursework in child development and early education methods as well as extensive on-the-job supervision and feedback.

Two lines of research have been pursued. The first sought to differentiate critical aspects of the educational process as it related to the characteristics of the learners involved. The studies have included quasi-experimental analyses of the motivational and performance value of providing adult learners greater independence in selecting their own objectives and of encouraging generalization to the home environment (teacher-as-teacher-as-person) (Llewellyn, 1983) and an analysis of the characteristics of program strategies and methods (closeness of supervision, routinization, and complexity of work with data, people, and things), as they relate to student changes in beliefs and cognitive flexibility (Sutton, 1983).

The second line of research has been directed toward assessing the effects of the CDA inservice education program on the career devel-

opment, classroom behavior, attitudes and beliefs, personalities, and personal and home lives of those involved (cf. Peters, Note 2). One aspect of this research illustrates the desirability of longitudinal methods and is reported here.

Sample

The 55 subjects of the study were working as teachers or teacher aides in seven different Head Start programs. All were involved in the two-year CDA inservice education program. All subjects but one were female. Their mean age was 36.3 years (range: 22-72 years). Forty-three percent had no prior college experience. At the start of the study, 36 enrolleess were in their second year of training. The remainder were in their first year. Nine of the first-year trainees were followed until the completion of their second year of training.

Measures

A battery of measures was administered in October 1981, May 1982, and in late March 1983. Measures assessing aspects of the teacher-as-person were a dogmatism scale (Rokeach, 1960), a locus of control scale (Rotter, 1966), a self-concept scale (Fitts, 1964), and a life events measure (Holmes & Rahe, 1967). The dogmatism and self-concept scales were administered on the first two occasions. Demographic information, including ethnicity, age, number of children, and marital status, was also collected.

Measuring aspects of the teacher-as-teacher were the Recent Teaching Events History checklist (Cichon & Koff, 1980) and a Teacher Belief Inventory (Verma & Peters, 1975). The Teacher Belief Inventory

measures the degree of cognitively oriented-child centered beliefs and behaviorally oriented-teacher centered beliefs. The Teacher Belief Inventory was administered on all three occasions. Information about previous educational experience and work history was also gathered.

Included in one questionnaire were several questions asking if the training program had any impact on the trainees' personal lives (teacher-as-teacher-as-person).

Results

Teacher-as-teacher. For the Teacher Belief Scale, a multivariate analysis of variance with repeated measures across the first two occasions indicated no multivariate significance. Univariate tests, however, indicated a significant [$F$ (1, 42) = 55, $p < .05$] increase in cognitively oriented-child centered beliefs. An analysis of differences between first- and second-year trainees (multivariate analysis of variance with repeated measures and Year as a factor) yielded significant multivariate [Hotellings $T^2$: $F$ (4, 38) = 3.28, $p < .05$] and univariate results. Year 2 trainees were significantly more likely to endorse cognitively oriented-child centered beliefs [$F$ (1, 41) = 5.0, $p < .05$]. Multivariate tests showed no significant interaction between teacher beliefs and year of training. Univariate tests, however, showed that the endorsement of cognitively oriented-child centered beliefs for Year 1 trainees increased [$F$ (1, 31) = 6.59, $p < .05$] over time, whereas for Year 2 trainees it decreased.

These changes in beliefs for first- versus second-year trainees over the six-month period between Time 1 and Time 2 were replicated

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Insert Figures 1 and 2 about here

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in the longitudinal analysis of the beliefs of the initial first-year trainees. For the nine trainees remaining in the program who participated in the second-year study, univariate analysis indicated a significant increase in the endorsement of cognitively oriented-child centered beliefs during the first year of training and a decrease in endorsement of cognitively oriented-child centered beliefs during the second year [$F$ (1, 8) = 5.47, $p < .05$]. Means and standard deviations for these analyses are found in Table 1 and are presented graphically in Figures 1 and 2.

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Insert Table 1 about here

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There were several significant correlations among the teacher-as-teacher variables. More years of teaching experience in early childhood education were significantly related to lower levels of cognitively oriented-child centered beliefs at Time 2 ($r = .30$, $p = .05$), but not at Time 1 ($r = .12$, $p > .4$). The number of recent teaching events checked was significantly correlated with higher levels of educational experience ($r = .34$, $p < .05$) and more years teaching experience in early childhood ($r = .46$, $p < .01$).

Teacher-as-person. No significant differences were found across time for the dogmatism and the self-concept scales (see Table 1).

Among the teacher-as-person variables, there were some significant correlations, but few at both times of measurement. At Time 2, high dogmatism scores were associated with low levels of self-esteem ($r = .44$, $p = .01$), but not at Time 1 ($r = .19$, $p > .2$). At Time 1, high dogmatism

scores were associated with having younger children ($r = .44$, $p < .01$), but not at Time 2 ($r = .27$, $p > .1$). External locus of control (which was only administered at Time 1) was significantly related to a younger age ($r = .34$, $p < .05$), smaller number of children ($r = .35$, $p < .05$), and recency of current marriage ($r = .38$, $p < .05$).

Relationship between personal and professional development. The Teacher Belief Scales were significantly related with a number of personal characteristics. Cognitively oriented beliefs were associated with younger age (at Time 1: $r = .32$, $p < .05$; at Time 2: $r = .28$, $p < .05$). At Time 1, cognitively oriented beliefs were also significantly related with self-esteem ($r = .34$, $p < .05$). Behaviorally oriented-teacher centered beliefs on both occasions were associated with high dogmatism scores (at Time 1: $r = .31$, $p < .05$; at Time 2: $r = .67$, $p < .001$). At Time 1, behaviorally oriented-teacher centered beliefs were associated with older age ($r = .39$, $p < .01$).

The majority of the trainees indicated that the training affected themselves personally (78%), their relationship with family and friends (53%), and their leisure time activities (66%). Many of the trainees felt this influence was negative and arose as a result of the time demands made by the training (44%). Some respondents indicated that the training had a positive effect as it increased their self-confidence (18%) or helped their relationship with their families (18%).

## Discussion

The study reported here is exploratory. However, the design and the results suggest several contributions a life-span approach to teacher development may have on the study of inservice education.

First, because a life-span approach allows the possibility of change at any age, included in the measures were concepts that are often assumed to be stable in adulthood, i.e., dogmatism and self-concept. Changes over the seven-month period between Assessments 1 and 2 were not found in these variables, but the possibility of change was empirically tested.

Second, the study was longitudinal and thus explored intra-individual change and interindividual differences in intraindividual change. Cognitively oriented-child centered beliefs did change over the 16-month period of study, and there were group differences in these changes. The Year 1 and Year 2 students showed different change functions, and these change functions were replicated in the longitudinal analyses.

The stable nature of these changes, as indicated by the longitudinal replication of the cross-sectional results, warrants further analysis. Two potential explanations can be offered. First, the Year 1 to Year 2 changes could reflect the nature of the educational program provided. For example, in general, the initial year of the program stresses the child development research and theory underpinnings of early educational practice. Such coursework tends to emphasize focusing on the child and on cognitive development. The second year of the program tends to stress educational methods, classroom management, and daily activities--subjects that tend to focus on the teacher's role in the enterprise. If this were the case, the results would suggest the short-term effects of the program on the teacher-as-teacher.

Alternatively, the changes could reflect a more generalized individual return to original beliefs, thereby reflecting a lack of enduring training effects and the predominant influence of the teacher-as-person dimension. The correlations of teacher beliefs with age and dogmatism would tend to support this explanation, as would the general finding of little or no change in the personality measures.

This brings us to our third point. A conception of teacher development that includes aspects of teacher-as-person, teacher-as-teacher, and their interactions adds to our understanding of the effects of attempts to intervene into the stream of teacher development. The "off-time" "out-of-sequence" sample of this study brings to its inservice educational experience a wealth of prior experience and firmly established beliefs. The correlational analysis suggests that some of these beliefs reflect cohort differences (or even generational differences) in attitudes toward child rearing and teaching. The data suggest that older students who were more likely to endorse behaviorally oriented-teacher centered beliefs at the outset were more likely to revert to those beliefs.

Self-reported measures indicated that the majority of the teachers felt that the training affected their personal lives. It is not surprising that many teachers felt time constraints, as Child Development Associate training is done in their own time. Some teachers receive release time to attend the actual classes, but they do not receive release time to study for the classes. The reports that the training helped the teachers interact with their families and increased

their self-confidence are intriguing. They do suggest that, for these older nontraditional students, the interactions of professional development and personal development may be a particularly fruitful area for study. These "unintended consequences" of the training with this somewhat unusual sample may be particularly important to an overall understanding of teacher development.

Finally, the life-span perspective reflected in this research has implications for teacher education across the professional continuum. First, the study of an unusual off-time out-of-sequence sample highlights the confluence of factors involved in the education and training of more traditional groups of teachers. For example, it makes it clear that the current zieguiest about development and teaching produces specific cohort effects as groups of teachers move through the teacher development process. These cohort beliefs and attitudes need to be recognized and, indeed, dealt with in subsequent efforts at intervention and innovation. Secondly, it is clear that we cannot assume contextual purity in teacher training efforts. Interactions among life tasks in the personal and professional context, factors we have classified in the teacher-as-person-as-teacher or teacher-as-teacher-as-person categories, do indeed occur and influence the effectiveness of teacher educators. Only through recognition and analysis of these factors can they be brought to bear to enhance the preservice and inservice teacher education process.

The data we have collected on the changes and interrelationships between the personal and professional lives of teachers are preliminary. Only a small group of preschool teachers have been studied. The

results, however, suggest the potential usefulness of life-span approach in expanding on current conceptualizations of teacher development and in differentiating between several aspects of teacher development.

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Table 1

Means and Standard Deviations

| | | Group | | | |
|---|---|---|---|---|---|
| | | First-year | | Second-year | |
| Variable | Time | $\bar{X}$ | SD | $\bar{X}$ | SD |
| Behaviorally oriented- | 1 | 45.1 | 9.78 | 40.1 | 7.43 |
| teacher centered beliefs | 2 | 42.3 | 8.81 | 42.2 | 6.13 |
| | 3 ($n$=9) | 41.1 | 5.06 | | |
| Cognitively oriented- | 1 | 46.5 | 5.05 | 53.5 | 7.10 |
| child centered beliefs | 2 | 51.6 | 9.01 | 52.9 | 5.93 |
| | 3 ($n$=9) | 51.1 | 5.18 | | |
| Rokeach | 1 | -20.7 | 30.90 | -17.71 | 24.72 |
| | 2 | -14.0 | 30.06 | -16.57 | 21.72 |
| Self-concept | 1 | 350.56 | 31.63 | 355.74 | 29.73 |
| | 2 | 351.76 | 34.11 | 352.21 | 32.75 |

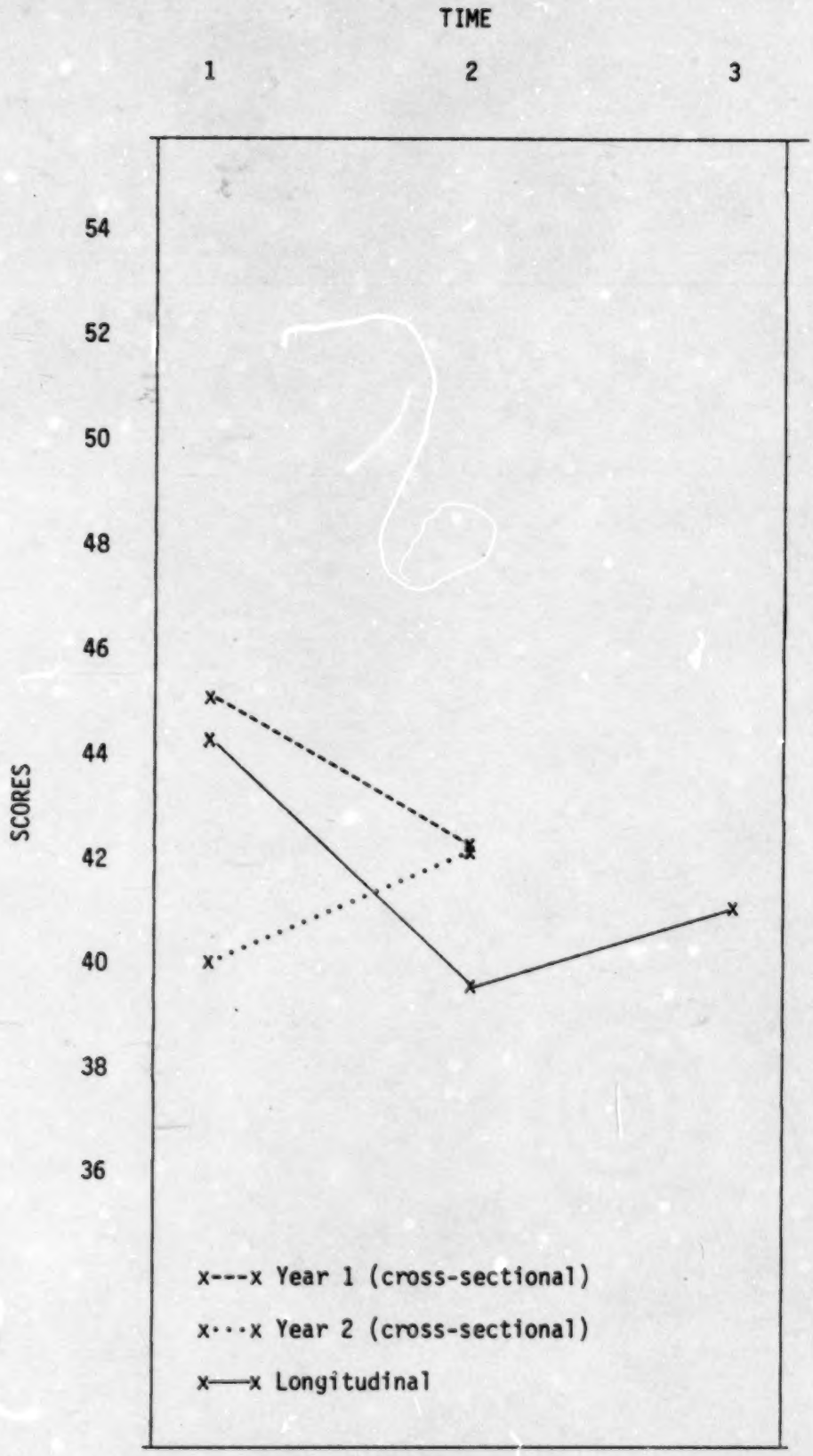


Figure 1. Behaviorally oriented, teacher-centered beliefs by time for cross-sectional and longitudinal (n = 9) samples.

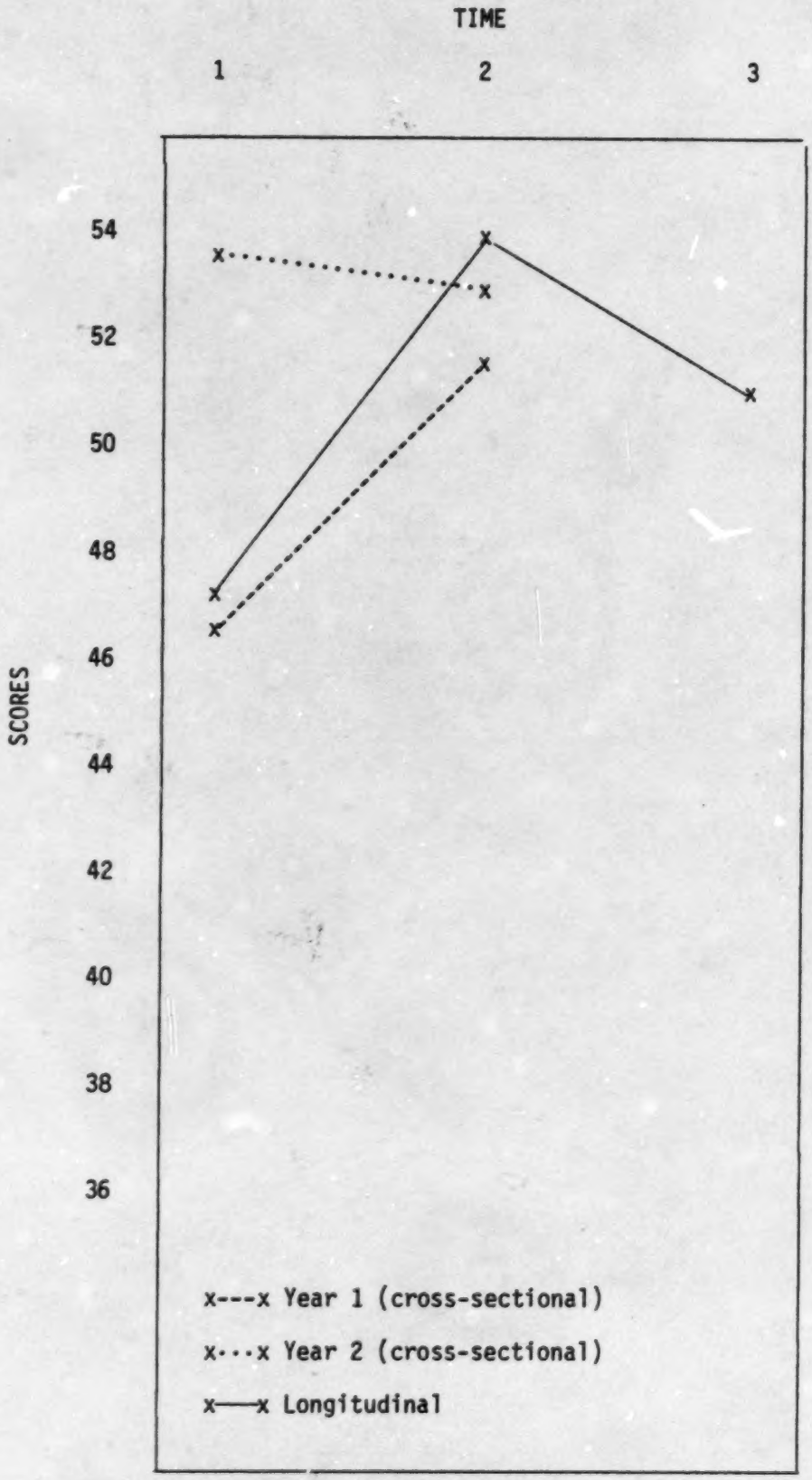


Figure 2. Cognitively oriented, child-centered beliefs by time for cross-sectional and longitudinal (n = 9) samples.